# US Semiconductors and Semi Equipment

## SemiBytes: Analog Update, MSFT Maia, Supply Chain

**Equities**

Americas

Semiconductors

**Timothy Arcuri**
Analyst
timothy.arcuri@ubs.com
+1-415-352 5676

**Natalia Winkler, CFA**
Analyst
natalia.winkler@ubs.com
+1-415-352 4626

**Gianmarco Vella**
Associate Analyst
gianmarco.vella@ubs.com
+1-415-352 4555

**Aaryan Wadhwa**
Associate Analyst
aaryan.wadhwa@ubs.com
+1-212-821 6481

**Seth Cho**
Associate Analyst
seth.cho@ubs.com

**Stacy Che**
Associate Analyst
stacy.che@ubs.com
+1-212-713 1857

### Analog Cycle Update - we still see upside to analog cycle

Analog stocks have proven to be a bit of a "safe haven" over the past few weeks as the AI trade has come under pressure. This is consistent with our choice of TXN as our top pick through year-end as part of UBS' research department-wide top ideas refresh (see HERE). In particular, history suggests a typical upcycle lasts ~8 quarters for the US analog companies, with the first year up mid-20%s Y/Y and the subsequent year up mid-teens % Y/Y (Figure 1). With our CY26/CY27 estimates up ~28%/19% Y/Y, some investors have been arguing that the upcycle is firmly into the latter innings. That said, we push back on this belief as we believe the recovery in traditional end markets is being overshadowed by secular data center growth. When excluding DC revenue growth of, we think, ~2x Y/Y in CY26E and ~60% Y/Y in CY27E (Figure 4), we find ex-DC analog revenue growing ~20%/~13% (vs total analog revenue growing ~28%/~19% Y/Y in CY26/CY27E). Furthermore, analog commentary intra-quarter suggests cyclical markets are still below prior peaks, with our drawdown data pointing to industrial/auto revenue still 12%/9% below prior peak (Figure 5). Overall, we believe there is further upside to the duration of the cycle, and we continue to view the setup heading into earnings as largely constructive.

### MSFT Maia source of upside for MRVL

Microsoft announced Maia 300 on 12-Oct, its next-gen internal inference ASIC, with production deployments starting in 2027 and, importantly, said it plans to scale the Maia family to multi-GW deployments, to power internal services like MSFT Copilot and ultimately make Maia its primary inference platform. This is consistent with our view that the market had been under-estimating the size and scale of this program and how large it could be for MRVL. The chip is built on TSMC N2P with 8 stacks of HBM4, 18TB/s of memory bandwidth and a 950W TDP, while the rack configuration scales to 96 accelerators in a 167kW power envelope; Microsoft is claiming 40% better tokens/MW versus leading GPU systems and up to 7x the rack-level token throughput of Maia 200. The bigger takeaway for us, though, is simply the potential scale of this program: at ~550K Maia accelerators per GW based on the disclosed rack configuration, multi-GW deployments imply multiple millions of accelerators as the program scales and MRVL's ASP could be in the $4k range (does not include HBM). We think that is ultimately very positive for MRVL once Maia reaches the scale Microsoft is targeting, given MRVL's exposure to the program. Put differently, even before assigning a specific number to "multi-GW," the unit opportunity becomes very large relatively quickly, and we think Maia could become an increasingly meaningful custom-silicon driver for MRVL as deployments ramp beyond 2027.

### Supply chain update - some modest slippage in Vera Rubin and Trainium3, but should not be an issue for rev-rec

Our Asia supply chain checks indicate that some component suppliers have signaled minor delays given some complexities around rack configurations and HBM shipments. Vera Rubin components have begun shipping, but volumes remain limited, and the broader ramp now appears to be maybe delayed by ~1.5–2 months - but this should not affect revenue recognition for the NVDA compute boards. Overall, we attribute the slippage to execution complexity across the new-node, advanced packaging, and HBM4 ramps rather than order cuts. Separately, our checks indicate that AWS's Trainium 3 ramp has slipped by ~1 month, modestly easing near-term competitive pressure from custom silicon.



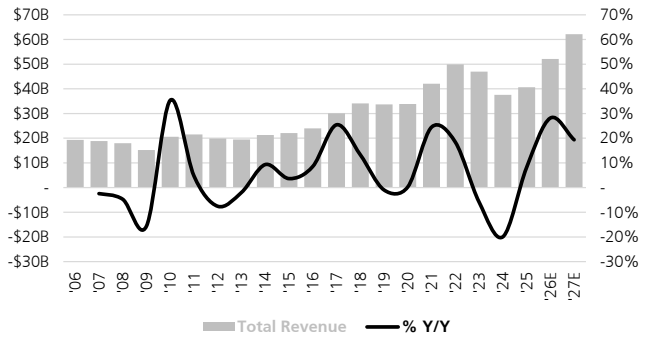

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**INFORMATION ON THE QUANTITATIVE RESEARCH REVIEW PUBLISHED BY UBS, BEGIN ON PAGE 5.**

**AMD Helion Rack Announcement**

This past week, AMD introduced Helion, an OCP-based rack architecture purpose-built for agentic AI, and we think the interesting part here is the recognition that agentic workloads will require a much more heterogeneous mix of compute rather than simply more GPU capacity. At the high end, Helion supports up to ~33k Zen 6 EPYC cores, up to 16 MI350P GPUs and 102Tbps of networking in a 21-inch, 44OU OCP rack, with both air- and liquid-cooled configurations. The architecture can be configured as a CPU-only rack for hyperscalers running agent execution separately from model inference, or as an integrated CPU/GPU system for enterprises, with AMD essentially arguing that different agents require very different mixes of CPU performance, core density, power and GPU acceleration. We think this is important because agentic AI could drive substantially more CPU intensity alongside GPUs, which plays directly into AMD's strength in EPYC and reinforces the broader shift toward heterogeneous compute at the rack level.

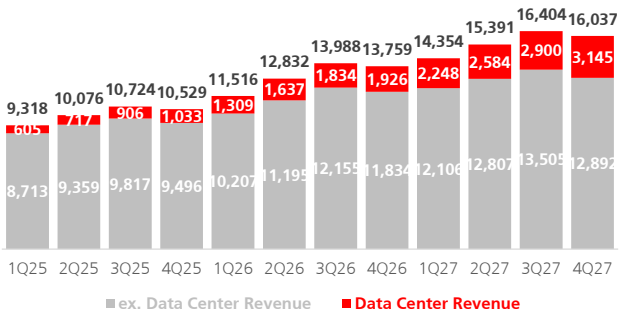
# ANALOG CYCLE CHARTS

### Figure 1: US Analog Cycle History



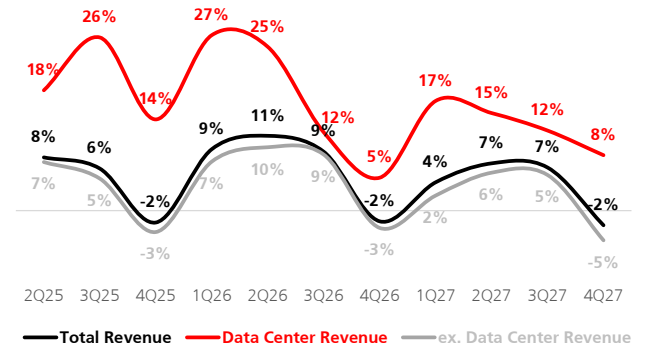

Source: Company reports, UBS estimates

### Figure 2: Quarterly US Analog Data Center Revenue ($MM)



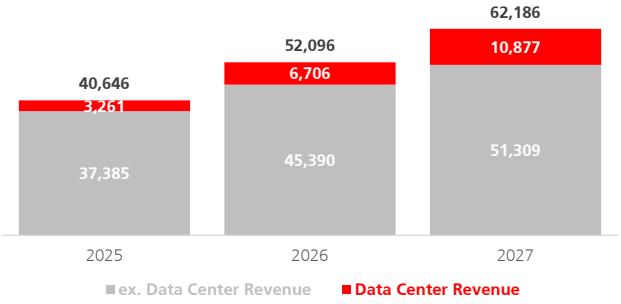

Source: Company reports, UBS estimates

### Figure 3: US Analog Revenue Decomposition



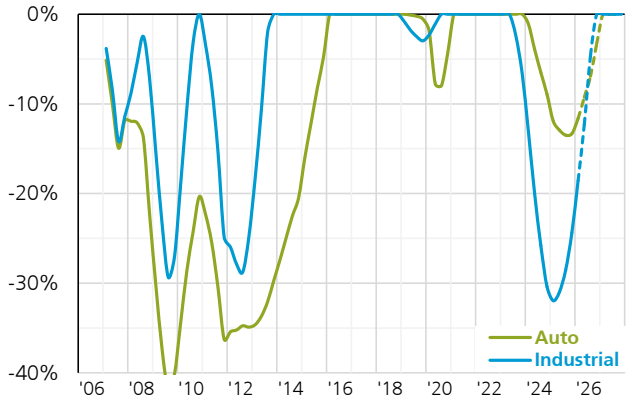

Source: Company reports, UBS estimates

### Figure 4: Annual US Analog Data Center Revenue ($MM)




Source: Company reports, UBS estimates

### Figure 5: TTM Auto & Industrial Revenue Drawdown From Peak




Source: Company reports, UBS estimates

**Valuation Method and Risk Statement**

We use various valuation techniques such as P/E, EV/FCF for valuing the companies in this report. Risk factors include but are not limited to macroeconomic factors such as a downturn in the economy, technological disruption due to new inventions, or business model innovation whereby structural changes in the industry alter the future course of revenues.